

**ADAPTATION OF ADVANCED PROCESS CONTROL  
BLOCKS IN RESPONSE TO VARIABLE PROCESS DELAY**

ABSTRACT OF THE INVENTION

An advanced control block that implements multiple-input/multiple-  
5 output control, such as model predictive control, within a process control system  
uses a compensation block or algorithm and a single control model based on a  
single process model to provide advanced control in a process having widely  
variable process delay. The compensation block changes the execution period  
of the advanced control block to account for changes in the one or more process  
10 variables responsible for the variable process delay, which eliminates the need  
to provide different advanced control models or control definitions for different  
operating regions for a process in the cases in which the delay in a process  
output is correlated to a measurable process or control variable.